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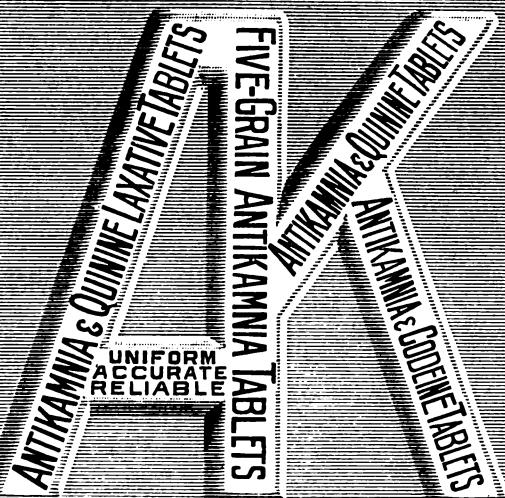
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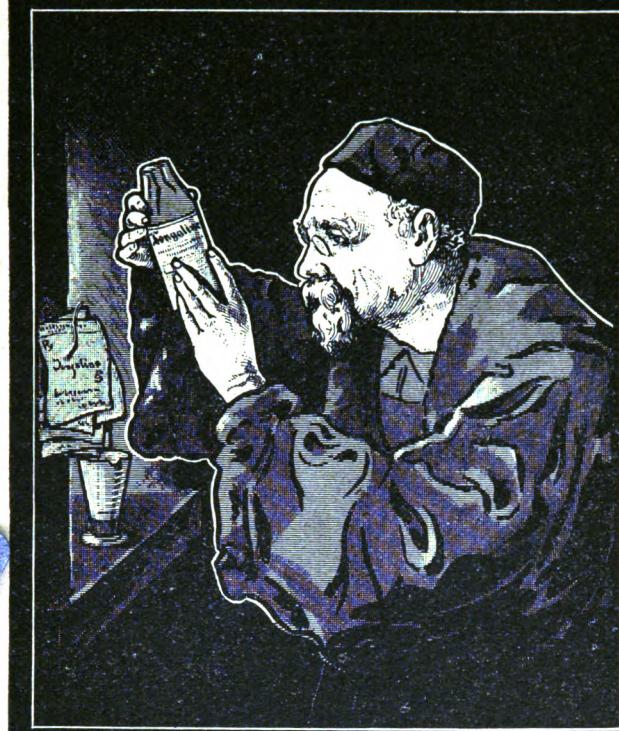
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*The Hot Springs
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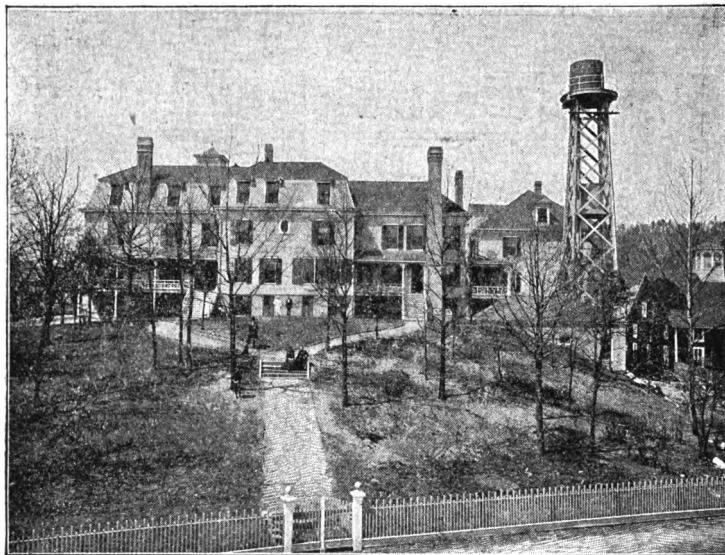
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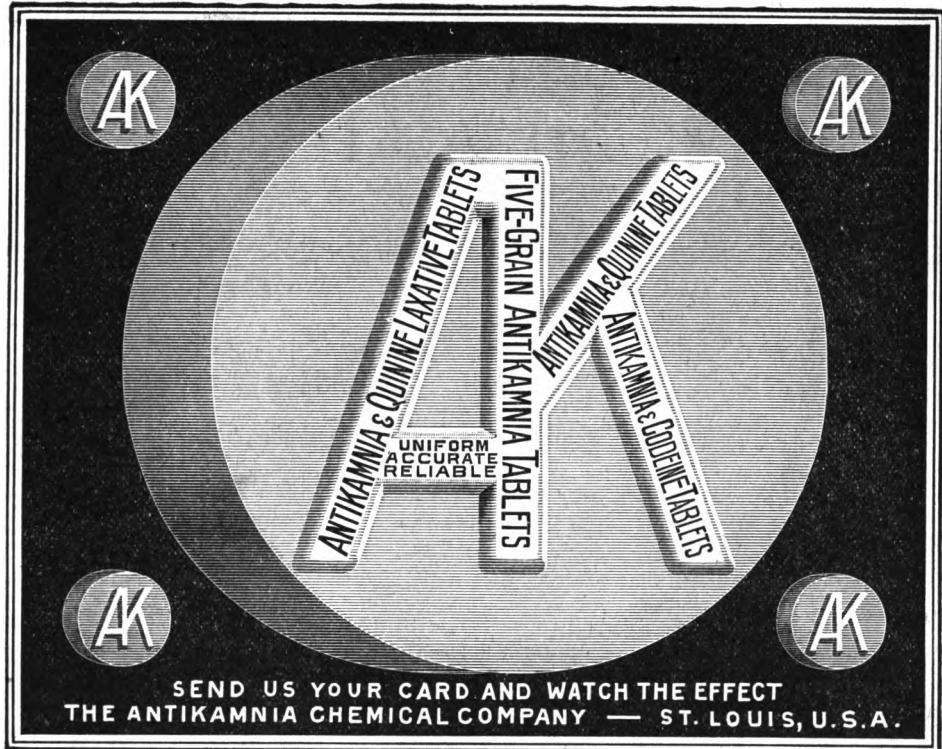
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ORIGINAL ARTICLES.

Intestinal Auto-Intoxication—Its Prevention and Treatment.

BY W. F. BARCLAY, M. D., PITTSBURG, PA.

The anatomical conformation of the human body is illustrative of divine wisdom in all its parts; it is truthfully written that man is fearfully and wonderfully made. The student of anatomy is impressed by intimate study of the parts embraced in the abdominal cavity in the relation which they sustain to the nutrition of the body. It is more especially in consideration of the organization of the three great compartments of the body, the cerebral, pectoral and abdominal cavities, in the intimate relation which they sustain to each other, the limbs being important in prehension, and locomotion—neither part can be disturbed without detrimental influence to the physical economy of the whole body. The organs contained in the abdominal cavity preside over digestion, assimilation, and nutrition, also secretion and excretion of the waste products of the body. The intestinal tract or canal is the part included from the stomach to the anus, being divided into small and large intestines. The first part constitutes about four-fifths of the entire length beginning at the stomach and ending in the right iliac region, and is divided into the duodenum, jejunum, and ileum. The large intestine begins in the right iliac region, ending at the anus. It is divided into coecum, colon, and rectum. The first part of the intestinal tract contributes to chylification, and absorption of the chyle, the second part as a reservoir, and excretory canal. It is important in these studies that the regional anatomy of the intestines be clearly defined, and understood, also the blood and nervous systems which contribute to the anatomy of the intestinal tract.

A careful study of the anatomy of the intestine in its muscular system, and the arrangement of the glands, serous and mucous membranes is necessary to a clear comprehension of intestinal auto-intoxication.

Auto-intoxication with infection is self-contagion in the sense of self-poisoning. In the comprehension of the anatomy and physiology of the intestinal tract and its functions, normal and abnormal digestion and assimilation, are considered in their relation to life and health.

Doctor Beaumont's observations upon the person of Alexis St. Martin are the most interesting and reliable which have been made. From the facts obtained we are enabled to affirm the part sustained by each organ until the food passes the pyloric end of the stomach, and enters the intestine. It is in observation that we arrive at conclusions of more or less practical value in the management of pathological conditions. It is not important to the sick that we understand the pathological conditions present if we fail to apply the means which will afford relief and effect cures.

"Teach me how to Live" is the vital question presented in every sick call, as disease is almost invariably the result of violation of some natural law, of known or unknown existence in the economy of life. The histological forces tend to the formation of organized tissues, being modified by antagonistic influences. The natural laws which determine the processes of the secretions and excretions of the body are harmonious in their equilibrate actions, and conserve the functions in the nutrition of the body and the elimination of waste products in the physiological actions of organic life. The inherent conformation of the parts and their functions are at all times dependent upon laws which tend to preserve life and health, but are modified by influences which are innate, as well as the laws of environment.

It is no less wonderful than instructive that the modification and arrest of vital functions in the alteration of the secretions and their toxic properties do not disturb vital forces to a greater extent than is as yet apparent in pathological results. Careful observation and study of the excretions of the body enable the student to understand their normal conditions, and the constituent equivalents of their composition.

The various organs of the body perform a consistent part in carrying on the equilibrate economy of life in the secretion of the nutrition and eliminative functions in their relation to each other. Abnormal conditions of the excretions do not definitely indicate disease of the part from which the excretion is obtained, but may eluci-

date the contamination of the same by reabsorption of effete matter. In the reabsorption of effete toxic matter ptomaines are formed in natural processes, as well as other products which are inimical to life.

If the conservative vital forces are overdone, toxalbumen poisoning is the pathological result in the elaboration of metabolic action.

The infection of the body by acute or chronic ptomaine poisoning is established by the most unmistakable evidence in total subversion of the living forces to the influence of the toxic effect of effete matter in the blood. It is evident that the origin of disease is frequently not suspected, when, in fact, it is an intestinal auto-infection. The etiology of intestinal auto-infection is in the imperfect digestion, assimilation, and absorption of toxic material which the vital forces are unable to render fit for the normal nutrition of the body.

The elective action of the function of secretion of the intestinal tract is a study of profound interest in the normal digestion and assimilation of food. That only certain parts of the ingesta are of apparent fitness to be absorbed and supplied to the circulation for elaboration, is to the physiologist a complex vital process, imperfectly understood. When the chyle enters the circulation, it is elaborated and certain effete products eliminated which are toxic or non-toxic in their nature.

It is proper that intestinal auto-infection be studied from clinical observation as to its etiology, characteristics and prognostication. It is easily within clinical differentiation to clearly define acute, subacute and chronic intestinal auto-infection.

It seems that medical literature has only considered chronic intestinal auto-infection, so far as my studies extend in research of the literature at my command.

The causes are so varied that I will only mention the more usual apparent exciting causes of intestinal auto-infection—food, drink, heat, cold, and varied toxic influences of internal and external origin. The acute forms of intestinal auto-infection readily occur in the study of cholera morbus, and the different forms of intestinal disease in adult life, incident to the use of unwholesome food, taken at irregular hours, as well as sudden changes of temperature, are the frequent causes of this disease. Cholera infantum and the disorders of the intestinal tract in infant and child life are the intestinal diseases caused by auto-infection, which are the most difficult of treatment of the diseases incident to early life of children.

The causes are too apparent to require serious consideration in this discussion. They readily occur to the physician in the study of this most dangerous class of disorders, to which infant and child life

are so large a part of mortuary reports. It is evident that acute intestinal auto-infection is so considerable a part of clinical studies that we may not omit the consideration of this group of diseases without serious inconvenience in the study of auto-infection. A careful study of cholera morbus, cholera infantum and other acute intestinal affections, clearly point out the clinical features of acute toxic poisoning. No one acquainted at all with the fatal character of cholera morbus and cholera infantum has failed to observe the general depression of all the vital powers, as well as the general relaxation and the disturbance of all the functions in depressed vital action. The heart in its action, and the general circulation, especially the capillary system, clearly and unmistakably indicate there is great loss of vital strength, extreme nervous exhaustion, which portends danger to life or the ultimate death of the patient, unless well directed means are employed for restoration of strength, and the recovery of loss of vital force. The toxic condition of the blood, which is manifest in a tedious convalescence, is the result of the impaired condition of the nutritive system, with nervous prostration. Infant and child life suffer most from the different forms of acute auto-infection.

The mortality reports are almost incredible as to the death rate from auto-infection of intestinal origin. Sanitarians devote more time and money to precaution, prevention and cure of these affections than all other diseases incident to infant and child life. The causes mentioned constitute the greater part of the etiological factors in causation of these affections. No one will for a moment doubt or underestimate the value of the preventive measures used in the avoidance of the intestinal diseases incident to infant and child life.

Sub-acute intestinal auto-infection is that form of toxic poisoning which is less pronounced in its characteristics in adult, infant and child life, being more amenable to treatment and marked by rapid recovery after the disease is controlled by proper care and medical treatment. It may be remarked that the sub-acute form of the disease is usually controlled by the removal of the cause in the selection of food and drink.

Chronic intestinal auto-infection is the form of this disease which has claimed largest consideration by medical writers. The profession of medicine is indebted to Doctor Bouchard for the first learned discussion of auto-infection and the consideration in particular of the varied toxic agents which are generated in the laboratory of the living organism, and the effect of toxic germs on the health of the human family.

The recorded observations of experiments made by Doctor Bouchard are of the largest scientific value, and the well-known ob-

servations of various authors on the value of antiseptic treatment are the greatest advances made in scientific medicine. The etiology of auto-infection of intestinal origin is the intoxication of the system by absorption of toxic products generated in the intestinal canal. Typhoid fever is an acute intestinal auto-infection of specific origin. The more clearly the physician comprehends the pathological conditions present, the more definite antiseptic measures used, the self-limited course of the disease may be defined.

Improper food, retention of excrementitious matter, altered secretions and other causes, set up putrefactive changes, and generation of toxins which are auto-infections.

Chronic auto-infection of intestinal origin is the slow development of these pathological conditions, mal-nutrition with altered cell-development, which is portrayed in varied pathological manifestations. It is certain that no subject affords a better field for scientific investigation, nor is the complexity of this subject easy of solution. It is most likely the condition which induces heterologous growth is established, and thereby the various abnormal aggregation of ulterior tissues which form tumors of benign and malignant character.

Cellular pathology has thrown much light upon this heretofore abstruse and incomprehensible subject in medical science; we anticipate the dawn of the advancement in scientific progress, when the cause of unknown pathological manifestations in altered cell-growth formation of adventitius tissue may be clearly understood, and the means in therapeutic research discovered for the alleviation and cure of those at present incurable diseases. To this may be attributed the tendency in the female to disease of the uterus and mammary glands, of malignant and non-malignant growth in the determination of blood to these parts by the menstrual function, in lodgment of material for abnormal cell tissue in ground suitable for continuous growth and development.

Degenerative disease is no doubt attributable to this cause in changes manifest in all tissues of the body.

Adventitious deposit and growth of low forms of degenerate tissue occlude blood vessels, shut off blood supply, lessen growth, weaken the activity of the various glands whose products enter into the processes of digestion, assimilation and nutrition in building normal tissues.

The normal growth is modified by disturbed vital process in waste material rendered unfit for use in tissue building by tox-albumens furnished the blood by auto-infection. Nutrition is life itself; in the chyle the elements which sustain life exist, which is

appropriated in the blood for the sustenance of life. In the disposition of the chyle in the blood certain effete products are formed, and eliminated by the liver, kidneys, and bowels. The reintroduction of these effete products in the body demonstrates how disastrous is their presence in the blood, in a train of symptoms which denote toxic poisoning.'

It is a most insidious condition of the blood, induced by continued mal-nutrition, the consequence of septic ptomain poisoning. The condition described as acute ptomain poisoning, known to general practitioners of medicine, caused by ultra intestinal changes in different kinds of food, in decomposition of soft shell fish, meat salads, ice cream, vegetables, and fruit which readily decomposes, and through chemic changes form toxic compounds of a most deadly character. The reverse condition, known as chronic ptomain poisoning, of intestinal origin, comes on with a train of characteristic symptoms not observed in other diseases. The removal of the conditions which excite intestinal auto-infection, with a continued course of treatment, will effect a permanent cure of this most deadly malady. The changes in the blood-making organs of the body in the lymphatics, blood vessels, liver, spleen, pancreas and other glands, are restored by hygenic, dietetic and medicinal treatment of considerable duration, with prospective healthy secretions and normal conditions. The causes which tend to intestinal auto-infection are various: bad food, improperly prepared food, rapid eating, over-eating, catarrhal conditions of the respiratory organs, constipation of the bowels; the use of syringes for regulation of the bowels being at all times a most fruitful cause of a condition of the bowels which can only be induced by a practice which can not be too positively condemned, and to which cause thousands of otherwise healthy organizations are permanently injured, and numberless lives sacrificed. It would be a blessing to humanity if syringes had never been invented and used. I cannot make too emphatic the condemnation of the disastrous effect of the use of syringes upon the parts to which they are applied, in the mistaken apprehension of their use in cleanliness and the removal of the contents of the lower bowels. Intestinal indigestion, with flatulence, is perhaps the most prevalent of abnormal conditions, which the general observer emphasizes as the result of improper methods of living.

The consideration of symptoms subjective and objective of intestinal auto-infection are so insidious and deceptive, the general observer, as a rule, is misled, and the real conditions overlooked.

The diagnosis of intestinal auto-infection is at all times difficult in distinguishing the differential diagnosis of stomachal and in-

testinal indigestion. The general recognition of indigestion is almost invariably attributed to some pathological condition of the stomach, when, in fact, the condition referred to the stomach is correctly intestinal in its origin. The large use of agents for correction of disturbances of the stomach are, it is observable, being left out of physicians' daily routine practice, and the more essential and rational use of antiseptics are being employed with great advantage to suffering humanity. The condition of the tongue is at all times of reliable diagnostic significance, as well as a peculiar cachectic appearance of the skin, with the alteration of the glandular excretion of the skin.

Headache in the morning is a significant symptom, with languor and a general depression of nervous action. The foul breath, with decayed teeth and a general offensiveness of the excretions, is pathognomonic. The pendulous abdomen, distended stomach, with eructation of mal-odorous gas, borborygmus, is indicative of fermentation of the contents of the intestinal canal with generation of gas. Headache, drowsiness, disturbed sleep with unpleasant dreams, and a general disposition to be irritable in disposition, with occasional melancholia. There is a disposition to the formation of adipose tissue, with muscular relaxation in a degeneration of muscular fibre, especially of the heart and other organs of the body. Palpitation of the heart is a frequent symptom of intestinal auto-infection, caused by pressure of the abdominal organs upon the diaphragm. Night sweats are in the advanced stages of intestinal auto-infection a frequent and alarming symptom. Women suffer more than men from intestinal auto-intoxication on account of sedentary habits, wearing of tight corsets and clothes which impinge upon the abdominal viscera, and impair their normal functions. Women more than men suffer from eating confectionery, pastry, and other unwholesome diet. To be the monitor of the female appetite will display the hazard to which the digestive organs of woman are exposed in the varied amount of unwholesome and indigestible matter which the powers of nature are taxed to digest and elaborate.

The inordinate use of all kinds of liquors consumed by man is a source of disease which can only be approximated in the discussion of diagnostic causes of intestinal auto-intoxication.

Other causes not enumerated will readily occur to the careful clinician in the study of intestinal auto-intoxication,—intemperance in its multiform aspects is the final summing up of the causes of the varied disorders of digestion. It is at all times evident the food and drink which man selects should be chosen with reference to its palatable and nourishing qualities, and be taken in moderation.

Hunger is the natural result of the appropriation of food consumed to sustain life and health, in the normal waste of the physical forces in the sustenance of life.

A careful study of digestion, and assimilation, demonstrates that the time required is variable, being modified by the character of the food consumed, vigor of the organization, age, and environment.

It is affirmed that food ordinarily consumed is entirely digested and assimilated, in adult life, in from four to seven hours; the time required in infant and child life is much shorter. It is believed from observation that food should be taken in adult life every four or six hours, in infant and child life every two to four hours. The taking of food three times per diem is a variable sanitary rule, which is modified by age, sex, temperature, exercise, and other natural conditions. The waste products of the body are governed in their dejection by the same laws which govern the appropriation of food for the sustenance of life. The natural evacuations of the body require no less care, time and consideration than the taking of food.

The care of the body as to natural evacuation is a question that has not been satisfactorily solved by physicians with reference to the preservation of health.

The routine prescription and use of cathartics as well as the daily use of all kinds of laxatives by the people is, of all questions in the practice of medicine, the most difficult of rational solution. It would seem that hygienic measures should solve this question in the selection of proper food, its healthful preparation, to be eaten, should be at regular intervals, with sufficient time for mastication and insalivation in moderate quantity, over-eating being at all times injurious. The attention to regular evacuation of the bowels is at all times a health assurance of paramount importance, rather than the use and abuse of cathartic medication.

The localization of pathological conditions in the intestinal tract and the application of remedial measures is most difficult, and at times grave lesions have been overlooked.

The total abstinence from food for considerable periods of time has been of valuable assistance in determining the part of the intestinal tract diseased. It is in the use of all means at the command of the physician in the present state of scientific advancement in medical practice that correct diagnoses of obscure intestinal diseases are correctly made.

The less cathartic used the better, nevertheless, when regulation of diet and other measures fail, it is imperatively required. The

more intimate knowledge of the normal secretions of the stomach, bowels and glands, which discharge their secretions into the bowels, have modified medical practice and shown how valueless much treatment hitherto in use has been, if not decidedly injurious.

It is evident that the food man eats and that which he drinks should be wholesome and nutritious and be taken in moderation. There is no subject less understood in the economy of life than dietetics by physicians, and their directions as to food and drink largely in error.

It is in the adulteration of food and drink that the vital powers are injured in the elaboration of much poisonous preservative substances used in the preservation of food.

It is not within the comprehension of this paper to discuss the selection and proper preparation of food suitable for the sustenance of life and the preservation of health. The chemic changes which take place induce diminished or increased secretion of the digestive fluids, being the result of irritation of the part of the intestinal canal which is pathological. The continuous irritation of any part of the intestinal tract induces hyper-secretion and catarrhal disease. The natural tendency of nature's resources is toward health, and in the observance of nausea, vomiting and the different forms of diarrhetic discharges from the bowels, the natural resources are contributing to the elimination of the toxic effete matter. The bowels in the condition just described are distended with fetid gas, the vermicular action increased, with pain usually of the large intestine. The putrefactive changes brought on by altered secretions, with generation of gas, over-distention of the bowels, modifies the function of absorption of the nutritive system, induces mal-assimilation, with anemia. It is a most frequent complaint that while patients suffer from hunger and eat ravenously they grow weaker every day. The quantity of food consumed is simply enormous, and the prostration at the same time alarming; careful examination of excrementitious matter from the bowels is an index to the part of the digestive system which is impaired in the discovery of undigested food, consumed at variable periods of time, prior to the examination made. Chemic changes take place, which is established by the discovery of ptomaines in the blood of known intestinal origin. The etiology of appendicitis has been difficult of comprehension. Careful anatomical study of the pathological conditions establish the theory that the cause is of septic origin. Proper dietary direction will, with medical treatment, prevent appendicitis.

The symptoms which indicate intestinal auto-infection are not difficult of detection by careful examination, nor is diagnosis ordinarily masked by the presence of other pathological conditions.

The digestive system is in nowise a garbage furnace for the destruction of all kinds of refuse matter; on the contrary, it is a receptacle for wholesome, nutritious food, consumed in moderation.

Many catarrhal conditions of the mucous membranes of the body are distinctly referable to intestinal auto-infection in the irritation caused by the elimination of toxic matter, and the changed condition of the excrementitious excretions of the body. The Philosopher said to the Doctor, "I have taken a cold." The Doctor replied, "Take a cathartic." It is certainly true that man is continuously in danger of auto-infection of intestinal origin, and that many diseases attributed to other causes are the result of infection. The infective disorders of the intestinal tract are more certainly attributable to the large intestine in the reactive changes which take place in the retention of effete matter. The retention of excrementitious matter in the bowels beyond the normal time, which is not over twenty-four hours, is prejudicial to health. The violation of natural law in the observance of the regulation of the bowels is the foundation of ill-health in a long list of intestinal auto-infections which are amenable to the daily habit of natural evacuation of the bowels. It is believed that constipation is a habit strictly American, and that it is largely the result of hygienic carelessness. It may seem I disparage medication. I do not, as I believe under existing modes of living, that cathartic medication is the only remedy. The solution of this problem is plain, if we continue to live as we do there is but one remedy and that is the continual use of cathartics.

The traveler is impressed by the observance of the advertisement of cathartic medicine, as almost every available building, fence, rock, or tree, is utilized for the display of cathartic medicines, as well as every conceivable method for portrayal of the advantageousness of special cathartic medication. The Americans are certainly a nation of constipates. The people of other nations are amazed at the suggestion of cathartics or their continued use as not being injurious to health. The treatment of intestinal auto-intoxication by medicines alone is a problem that suggests continued medication without regulation of diet and other hygienic measures.

Exercise is ever requisite in the preservation of health; walking is a health assurance, which should be a daily practice of the distance of at least five miles per diem. The time of taking food and studied time consumed at meals is important in avoidance of over-eating, never taking sufficient food to induce discomfort in the digestive organs. Medicines, when suggested, should be employed, not as to their continued use, but to afford immediate relief from pressure of effete matter in the intestinal tract, with abstinence from eating when the tired powers of alimentary physical economy are exhausted.

Rest is nature's remedial resource first, last and all the time, and its enforcement is a means of treatment which will afford more relief than large prescriptions of medicine. Calomel stands easily at the head of the list in the treatment of intestinal auto-intoxication in its action, when judiciously administered. Strychnia and ignatia arsenica, in the treatment of intestinal auto-intoxication, especially where there is atony of the muscular system of the intestinal tract, is especially indicated. The natural mineral waters, as aperients, are most useful. Apenta, Hunyadi and Carlsbad are the products of nature's laboratory, and are only objectionable in not being of uniform strength. The use of water is of paramount importance, taken in large quantities, cold always being preferable. The hot water craze is, happily, almost a thing of the past.

I may be pardoned in mentioning the solutions of gold and arsenic. Gold arsenic and mercury (arsenaura and mercauro), with papoid and soda as having been a most useful therapeutic aid in the treatment of intestinal auto-intoxication. The doses should be small and continued, five drops in half glassful of water after eating, with one or two grains of papoid with three grains of bicarbonate of soda before eating will in a number of cases be of happiest use in the cure of this most intractable and incurable pathological condition of the intestinal canal. It is important to recall the old-time herbs, chamomile, boneset, balm of Gilead buds, and the mint herbs so useful when well employed.

I have directed one ounce of boneset and one ounce of balm of Gilead buds in one quart of good rye whiskey, to be taken in small doses before or after eating, with the success that attends well-directed treatment. The intense bitterness, with the balsamic taste of the balm buds, forbids the acquirement of any taste for liquor. I doubt the value of pepsins and peptonoids, and have left off their use. The cool and cold baths is a means that can be used most advantageously. I can not more than suggest some of the means which have seemed to be valuable in the treatment of intestinal auto-intoxication. The time afforded is too brief to more than mention the line of treatment which is indicated.

October 3, 1899.

YOLK OF EGG AS EXCIPIENT FOR SALVES.

Unna is now using a salve composed of two parts yolk of egg to three parts oil of sweet almonds, blended as for a salad dressing, to which is added the medicinal substance required to a portion of ten per cent. The salve dries rapidly and forms a protecting covering especially advantageous in eczema, acne, and scabies. One per cent Peruvian balsam will prevent decomposition.—*Indiana Med. Record.*

SELECTIONS.

Syphilis of the Nervous System and the Use and Abuse of Mercury and Iodin in its Treatment.*

BY WILLIAM M. LESZYNSKY, M. D.

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Syphilis of the nervous system and its treatment is a subject of such magnitude and universal importance that it can not be satisfactorily dealt with in a brief discourse. My remarks will therefore be confined more particularly to intracranial syphilis, this being the commonest type of the disease with which we have to deal.

Syphilis is one of the most frequent infectious causes of organic nervous disease. Hence, in every patient who appears with symptoms of disease affecting the nervous system, we must ascertain, if possible, whether he has ever contracted syphilis. This is comparatively difficult with women patients. In every doubtful case we are forced to depend on the existence or non-existence of somatic signs of the disease, the collateral symptomatology, and the character and course of the nervous manifestations. When it is discovered that syphilis has been acquired at some more or less remote period, it does not necessarily imply that every morbid condition of the nervous system which develops in the subsequent course of life should be at once attributed to this early infection.

Although such an individual is more apt to develop nervous syphilis, he is in no sense exempt from other (non-syphilitic) nervous disorders.

On the other hand, there are certain rather characteristic symptoms occurring in connection with lesions of the nervous system, which are unmistakably traceable, in almost every instance, to a previous or existing syphilitic process. If the disturbance is evidently of a luetic nature, it does not logically follow that the prognosis is favorable even under the best management.

When confronted with a disease of the nervous system in which the etiology seems obscure on account of the absence of a previous luetic infection, the physician has frequently expressed his conviction to the patient that the presence of an antecedent syphilis would

* Read before the New York County Medical Association, Dec. 18, 1899.

simplify the treatment, and thereby insure a favorable result. This erroneous idea has unfortunately become more or less prevalent, not only among physicians but likewise among laymen. Such an optimistic view is unjustifiable, and frequently leads to disappointment. It is usually based upon a mistaken conception of the pathology of the disease, or a credulous adherence to ancient and traditional doctrines.

The large majority of clinicians agree that thorough treatment in the early period after infection is the most efficient means of protection at our command, and that those who are either inadequately treated, or not treated at all, form the greater contingent of the class who pass into the so-called tertiary stage. This view represents the consensus of opinion of many reliable observers, and is based on an overwhelming mass of statistic material collected in all civilized countries.

In spite of this, several observers assume a heterodox attitude, in stating that recently acquired syphilis, whether thoroughly treated or not, uniformly passes into the tertiary stage of the disease. No matter how much polemic argument is indulged in on this point, we are forced to acknowledge from practical clinical experience, that patients in whom a thorough and systematic anti-luetic treatment was carried out during the early stage following the primary infection, are not insured thereby against subsequent syphilitic disease of the nervous system. In these patients, however, it would seem that the symptoms appear in a milder form as compared with those who had never received suitable early treatment.

That the so-called degenerative types affecting the cerebrospinal system often appear in spite of vigorous early treatment is too well known to be denied. It will thus be seen that we possess no sure remedy which will protect the nervous system against its ravages when syphilis has once been acquired.

It is a remarkable fact, familiar to all neurologists, that in many patients whom we see with unmistakable signs of nervous syphilis, the primary infection has not been followed by any recognized secondary symptoms. Careful interrogation results in the information that there was an indurated chancre on the prepuce, with or without enlargement of the inguinal glands, and that is all. It is probable that a roseola was present but was overlooked. The absence of early treatment in these mild cases of acquired syphilis may account for the frequency of such conditions.

The syphilitic poison, when it invades the nervous system, affects it in several characteristic ways. 1. It may attack the intracranial or spinal arteries, producing an endarteritis, which gradually leads to thrombosis and occlusion of vessels, thus cutting off the blood-supply to the corresponding area. 2. It may give rise to a

gummatous growth, or to a local or diffuse gummatous exudate, involving the meninges and infiltrating the adjacent brain structures. This specific inflammatory process may gradually press upon, or ultimately destroy by new tissue formation, conducting fibres or nerve-cells. 3. The nutrition of specially susceptible cell structure may be slowly interfered with, the cell substance and its processes undergoing gradual degeneration.

The first two forms are known as "inflammatory" or "exudative," and are usually more or less acute in their onset. They are not always late manifestations, for they often occur within the first two or three years, and may arise within a few months after infection. The latter has been characterized as "degenerative" or "post-para-" or "meta-syphilitic," and is essentially chronic.

The gummatous meningitic exudation most frequently attacks the base of the brain, involving the cranial nerves. The forms of brain syphilis most dangerous to life are: 1. That which attacks the cerebral arteries, producing obliterative endarteritis. 2. Basal meningitis and meningo-encephalitis extending to the posterior fossa.

While it is virtually admitted that syphilis is an incurable constitutional disease, paradoxical as it may seem, it is the most amenable to treatment under certain conditions. The fact should be well understood by all, that while many of the effects of the disease are thus amenable, there is no method known at the present time by which we can eradicate the virus or its toxins from the system, and be enabled to say positively that the patient will remain free from further attacks. The *materies morbi* remains latent for years, unexpectedly manifesting its potency through some unknown exciting cause.

A clear comprehension and appreciation of the following important facts, which will bear repetition for the purpose of emphasis, may be the means of saving many a patient from useless, if not dangerous, medication.

1. Syphilitic inflammation produces more or less exudation, which terminates in the formation of connective tissue. Should this fibrous tissue entangle nerve-cells or fibers in its meshes they may be permanently destroyed. The symptoms that result from this interference with innervation or conductivity, when they have persisted for months or years in spite of active measures, are those that prove unamenable to further anti-syphilitic or any other form of treatment.

2. When a cerebral artery becomes the seat of thrombosis, and this is most frequently the middle cerebral or its branches, whether such obstruction be superinduced by syphilitic endarteritis, atheroma or otherwise, the immediate results are similar. The interference with the nutrition of the corresponding cerebral area is shown by either partial or complete loss of physiologic function. The degree

of the disturbance depends, *a*, on the size of the vessel involved, and the extent of structure which it supplies; *b*, its partial or complete occlusion. When the caliber of a small vessel is obstructed or obliterated, there may be some restitution of function through the early establishment of a collateral circulation. This does not occur, however, when a large artery becomes closed. The result of this cutting off of the blood-supply is necrotic softening. This dead brain-tissue can not be restored by antisiphilitic treatment. In many of the patients in whom occur transient monoplegia or hemiplegia, or aphasia, or attacks of petit mal or other loss of consciousness, these symptoms are occasioned by beginning thrombosis of cerebral blood-vessels. The distinction should be made in every instance, between those due to simple atheroma and those due to syphilitic endarteritis.

3. Cerebral hemorrhage of the familiar form, destroying the motor fibers of the internal capsule, may be the result of the rupture of a syphilitic artery. This is of much rarer occurrence than thrombosis. It is the hemorrhage that has done this damage mechanically, and the resulting paralysis can no more be correctly termed "syphilitic hemiplegia" than the hemiplegia resulting from necrotic softening in the same location. In both instances, certainly, syphilis is recognized as the remote cause, but the destruction of this portion of the motor tract is irremediable, and can not be modified by the use of antisiphilitic remedies.

I have thus endeavored to show that such residual symptoms indirectly due to syphilis can not be favorably influenced by antisiphilitic treatment, or by any other measures at our command. It is not only useless, but harmful, to persist in giving such patients either mercury or iodid of potash for an indefinite time, with such an object in view.

We must, therefore, direct our attention to the removal of the specific process itself, and in this accomplishment often lies one of our most brilliant therapeutic achievements. Recent exudative inflammation, gummatous growths, gummatous meningitis and meningo-encephalitis, pachymeningitis, obliterative endarteritis and periarteritis are *the* conditions which are most amenable to antisiphilitic treatment. It is not sufficiently recognized that there are extreme variations in the natural character and course of the disease. In some, it is brief and the symptoms disappear spontaneously. In others, it is extremely virulent, and there is a tendency to frequent recurrence, which may or may not be influenced by treatment. As individuals differ in personality, constitution, idiosyncrasy, etc., so does the activity of the syphilitic poison and the reaction to treatment vary in different individuals. The same is true in regard to all other infectious diseases. Much satisfaction will be gained by the knowledge that, in general, the good results of antisiphilitic treat-

ment are shown early in the first or second week, improvement being at times marvelously rapid. Occasionally it takes from two to six weeks before improvement begins.

The rapidity of relief depends on several important factors: 1. The virulence of the disease. 2. The duration and character of the symptoms. 3. The susceptibility of the patient to the action of mercury and iodin.

The only drugs known to possess a specific influence on the disease and its pathologic products are mercury and iodin. The customary and preferable method of administering mercury is by daily inunction, until some of the familiar signs of mercurialization are manifested. The time required for this effect may be from a few days to two or three weeks. In rare cases, where a more rapid action is desired, we may resort to subcutaneous injections of calomel or bichlorid. Iodin, in the form of iodid of potassium, is given in saturated solution, usually beginning with ten minims three times a day, well diluted, and the dose gradually increased daily to the point of intolerance. Some patients can take with benefit, and without discomfort, as much as two or three drams or more three times a day. It has always seemed to me that the iodid is quicker in its action than mercury, the alarming symptoms of cerebral syphilis sometimes disappearing like magic under its use. As a rule, it has been my custom to begin with mercurial inunctions, followed by increasing doses of iodid of potassium. When a rapid effect is required, the iodid is given in conjunction with the mercurial treatment. The duration of treatment with iodid of potassium varies with the individual patient. Generally speaking, its use should be continued until all active symptoms have subsided. Two or three months, however, is about the average length of time. Early, energetic and persistent treatment should be the rule; the earlier the better. Much harm may be done to the general health by the excessive, prolonged and injudicious use of these remedies. As a special illustration, I may mention that primary optic nerve atrophy progresses more rapidly to complete blindness under the protracted use of mercury.

The choice of preparation, the method of administration, and the dosage, should be governed by the exigencies of the case and the judgment of the attending physician. For further details I must refer to the various modern text-books on this subject.

The syphilitic virus, like the virus of other infectious diseases, by diminishing the resistance, i. e., the vitality of the cell, more readily predisposes the patient to degeneration in the nervous system. It is this broad principle which should guide us in the general management of every case, whether it be of the degenerative or the exudative variety. We should, therefore, invariably institute a suit-

able tonic regimen, in conjunction with and following the specific medication.

Tonic measures, such as nutritious food, baths, massage, electricity, and all other means directed toward improving the general health, must not be considered simply as adjuvants, but as constituting a most important therapeutic element, and continued as long as necessary.

As a prophylactic against recurrence, moderate doses of iodid should be administered daily for several weeks, three or four times a year, and the general health conserved as much as possible. In no other affection of the nervous system is a comprehensive knowledge of neurology more essential, our measure of success in the treatment depending on the early recognition of the cause of the symptoms.

When the diagnosis of syphilitic disease is doubtful, too much dependence should not be placed on the so-called therapeutic test, or, as it is frequently termed, the diagnosis *ex juvantibus*. While it possesses at times a certain value, it is more often unreliable, for we all know that mercury influences simple as well as syphilitic inflammation, and that iodin also promotes the absorption of non-syphilitic inflammatory products. On the other hand, the presence of syphilis can not be positively excluded when improvement *fails* to follow the administration of these remedies.

In this connection, the following illustrative and characteristic case will prove interesting in demonstrating many of the points above mentioned:

L. T., 32 years of age, born in the United States, was first seen by me Oct. 21, 1897. She was married sixteen years ago, and has one child, now 15 years old, in perfect health; no miscarriages. She has been separated from her husband for ten years, owing to his dissolute character. She was well until five years ago, when she began to have pain in the course of the left sciatic nerve. During this period there were occasional intervals of freedom from pain, the longest being three months. About a year ago, without any previous injury, large ulcers developed on both legs, which were slowly healed after prolonged treatment. Three months ago she was attacked by severe paroxysmal general headache about every half hour. Sometimes it was almost continuous day and night. This was accompanied by failing vision. During the last four weeks there has been persistent and continuous pain on the left side of the face and in the left eyeball. This was associated with frequent, sudden, and apparently causeless vomiting. She also complained of diplopia, somnolence, general weakness and extreme sensitiveness to cold. There was no history of primary syphilitic infection, alcoholism, or injury to the head. The menstrual function was regular. The bowels are always constipated. During the last four weeks she has been under medical

treatment for trigeminal neuralgia and has taken antineurālgic remedies galore without relief.

The patient, who was accompanied by her mother, appeared in dire distress, with her head almost completely enveloped in several large wraps, her eyes only being partly exposed. She moaned most of the time, frequently uttering a sudden agonizing shriek. She was admitted to the hospital, under my care, for further examination and treatment.

On admission, the pulse was 76 and regular; temperature and respirations normal. The heart, lungs and abdominal organs showed no evidence of disease. There was considerable mental hebetude and somnolence. She suffered from paroxysms of intense pain, affecting the two upper branches of the left trigeminus distribution, and the frontal region on both sides. The scalp was hyperesthetic, especially on the left side. There was tenderness on pressure over the spinous processes of all the cervical vertebrae, but no rigidity of the neck muscles. Slight convergence of left eyeball was evident, as a result of paresis of the external rectus muscle, which required a prism of 30° to overcome the diplopia. The pupils were unequal, the right measuring 5 mm. and rigid; the left 3 mm., but reacting well to light, although there was no reaction consensual or in efforts at convergence. Vision: R. E.=20/30—; L. E.=20/30—.

There was "choke disc" of 3 D. in the left eye, and receding papillitis in the right. Right homonymous hemianopsia was present, and right facial paralysis, affecting only the lower branches. The tongue protruded well, but deviated slightly toward the right. There was no objective sensory disturbance in the course of the fifth nerve. Hearing and sense of smell were normal. There was right hemiparesis, with exaggeration of all reflexes and ankle-clonus on the same side; left side normal; no sensory disturbance. There were marks of old ulceration over the calf muscles on both sides. Examination of the urine was negative.

Diagnosis.—Syphiloma, involving the left crus, destroying the left optic tract, and making pressure on the pyramidal fibers, and the fifth and sixth nerves, on the same side.

She was given a large enema and 5 grains of calomel, which proved effective in relieving the constipation. In addition to general management, mercurial inunctions were begun at once and continued twice daily, in conjunction with increasing doses of iodid of potassium, beginning with 12 grains three times a day.

Within three or four days, the vomiting, pain, and hebetude began to subside, and gradually disappeared a few days later. She remained in the hospital two weeks. During this time the pulse, temperature and respirations were normal. The mercury was discontinued at the end of three weeks, the iodid being given for ten weeks

longer, the maximum dose being 70 gr. t. i. d. The optic neuritis, and the paralytic symptoms had entirely disappeared at the end of five weeks, the pupillary rigidity and the hemianopsia remaining unchanged.

She has been under my observation from time to time during the last two years, and there has been no recurrence.

At the last examination, made Nov 20, 1899—over two years since her illness—it was noted that she was in perfect health. The left pupil did not react to light, and vision was: R.=20/20; L.=20/20; and the hemianopsia was still present.

It will be observed that all the active symptoms disappeared rapidly under treatment, while the residual symptoms, such as the loss of pupillary reflex and the hemianopsia have remained permanent.

It has been said that there is no form of syphilitic nervous disease which should exclude "specific" treatment. From such a misleading statement, it would be inferred that mercury and iodin are also beneficial in all cases of the so-called parasyphilitic affections, among which have been included a large percentage of cases of tabes, paretic dementia and progressive ophthalmoplegia. As previously mentioned, these diseases are degenerative in character.

When uncomplicated by a specific inflammatory process, they are not benefited by such treatment. One difficulty in this matter lies in the possibility of mistaking cases of exudative cerebrospinal syphilis for true tabes, *i. e.*, an inflammatory for a degenerative condition. I speak of tabes because it is the most common and representative type assumed to belong in this category. When such a differentiation is not clear, or is impossible, the patient should be given the benefit of any reasonable doubt, and these drugs be administered.

What I wish to emphasize is that patients with tabes, for instance, who have had syphilis, but have never received antiluetic treatment since their tabetic symptoms have occurred, should be given a course of active medication for several weeks. If this has already been carried out without relief, it is useless, nay, even harmful, to repeat the procedure. Not only have I never seen such patients improved by this means, but I have repeatedly noted an increase in the degree of many of the symptoms, presumably as a result of interference with the general nutrition. For several years many writers have endeavored to prove, by a formidable array of statistics that "syphilis is *the* cause of tabes," and that "without syphilis there would be no tabes." It is to be deplored that the majority of practitioners, in blindly following this extravagant dogma, look on "tabes" and "syphilis" as almost synonymous terms, their consecutive thoughts on this subject when expressed laconically being locomotor

ataxia, syphilis, mercury and iodid of potassium. Among many others, I must still maintain the opinion that tabes is *not always* due to syphilis, and that many cogent reasons are forthcoming which will sustain this view.

With the positive knowledge of an antecedent syphilis, we are by no means certain that these degenerative diseases are always the result of such early infection. From careful observation in a large number of cases, it has always seemed to me that there are additional causative factors, such as alcoholic, sexual or other excesses, or a congenital or acquired neuropathic constitution, which favor the development of degenerative processes in the nervous system, even in those patients who have contracted syphilis at some remote period. But this is neither the time nor place for the exploitation of the facts bearing upon this interesting and important topic. Let us all look forward with the hope that rapid advance in the modern methods of bacteriologic research will be the means of discovering the specific germ of syphilis, and its antitoxin, and thus prove the salvation of humanity from one of the greatest scourges of civilization. At the present time, then, the prevention of syphilis is practically an unsolved problem. For men may come and men may go, but syphilis goes on forever,

56 East Fifty-eighth street.

DISCUSSION.

Dr. Edward D. Fisher said that cases of nervous syphilis yielded the best results under antisyphilitic treatment when the process was a rather acute one. Thus, in pseudogeneral paresis, and in cases of rapidly developed paralysis of the ocular muscles, occurring independently of rheumatism, one might expect satisfactory, and sometimes even brilliant, results from specific medication. Spinal syphilis is often confounded with tabes, though usually easily differentiated by remembering that tabes is never so rapid in its development. He would recommend a trial of antisyphilitic remedies in all cases of tabes characterized by sudden exacerbations, as such fluctuations are generally regarded as evidence of fresh gummatous infiltrations.

Dr. Edward G. Janeway cited several cases in illustration of the importance of the physician endeavoring, in cases of cerebral syphilis, to determine both the nature and the site of the lesion. Thus, in a case diagnosed by an eminent neurologist as one of tumor of the brain, no new growth was discovered at operation, and the autopsy showed instead a syphilitic hyperostosis of the skull. It is well to remember that in cases exhibiting a peculiar intolerance to iodid of potassium, iodid of sodium or of strontium may be better borne, and if these also fail, excellent results may still be achieved by giving iodid of potassium by the rectum. The diagnostician should bear in

mind the liability of mistaking a persistent fever, coming on in tertiary syphilis, for tuberculosis. Regarding the relation of syphilis to tabes and general paresis, the speaker stated it to be his firm conviction that, in the great majority of instances, these diseases are of syphilitic origin, and he, therefore, advised in doubtful cases a resort to the therapeutic test, claiming that it is fully justified by the circumstances.

Dr. Charles I. Proben thought one could not reasonably expect much benefit from antisyphilitic treatment in cases of the degenerative type. Sometimes iodid caused marked emaciation, and when this was observed, the dose should be reduced, or the drug entirely discontinued. This reduction in the body weight is especially noticeable in persons suffering from tuberculosis.

Dr. Boleslaw Lapowski favored the use of mercury in the metallic form, as this imposes the least work on the system. It is his practice to use mercurial inunctions whenever possible, with due attention to the state of the kidneys and their ability to eliminate the mercury. In cases of such urgency that even mercurial inunctions are too slow and uncertain, he would be willing to employ calomel injections, or even the admittedly dangerous method of administering sublimate by intravenous injection.

Dr. H. M. Leszynsky, closing the discussion, took issue with Dr. Fisher regarding the harmlessness of the iodid, claiming that it not only interferes with the nutrition of the individual, when continued for too long a time, but renders the patient less susceptible to its action, so that in the event of the development of new and urgent complications, the physician would be unable to stay the progress of the disease. Moreover, it has seemed to him occasionally that he had actually hastened connective tissue formation by giving iodid.—*Journal American Medical Association*.

Acute Abdominal Symptoms Demanding Immediate Surgical Intervention.

In the *Boston Medical and Surgical Journal*, October 19, 26, and November 2, 1899, Morris H. Richardson, M. D., discusses the above subject. The paper is of special importance, because it interests the general practitioner and the surgeon alike. He says:

The initial symptoms which attend abdominal emergencies are first observed by the general practitioner, and must be interpreted by him. Acute abdominal lesions still possess a deplorable mortality, which is much greater after years of experience than it should be. The lesions to be considered are, with one or two exceptions, curable, but the outlook varies with the promptness of intervention. They

are practically all fatal if left to themselves. Intervention, to be successful, must be early. The exact nature of the lesion cannot always be determined before operation. Symptoms must be depended upon rather than diagnosis—initial and obscure symptoms rather than late and positive diagnosis.

The patient is not always seen by either the family physician or surgeon at the critical period of invasion, and too often the favorable moment for operation is lost. Too often symptoms of the gravest nature are misinterpreted by the most experienced. The dangers of operation, even in skilled hands, are by no means small. The most important factor is the loss of time, after initial symptoms appear. While he thinks that it is not advisable to scare every patient with the initial symptoms of appendicitis, he deplores the fact that certain journals lead to the popular belief that appendicitis is a fad—a belief that encourages families to withhold surgical aid, which in hundreds of patients offers the only chance for recovery. Fortunately, the onset of abdominal lesions that must be treated surgically, if at all, is so ominous of disaster that even the layman is usually alarmed. The lesions which produce symptoms that place life in jeopardy are given in the following outline:

- I. Those in which hemorrhage is the chief factor.
- II. Those in which peritonitis is the chief factor.
- III. Those in which intestinal obstruction is the chief factor.
Certain lesions may belong to one or more groups.

- I. Abdominal hemorrhages are either
 - (1) Post-operative.
 - (2) Traumatic.
 - (3) From ruptured extra-uterine pregnancies.
 - (4) From ruptured hemorrhagic cysts.
 - (5) From gastric ulcers.
- II. Peritonitis may be owing to
 - (a) Extravasations from intestinal tract occurring in
 - (1) Appendicitis.
 - (2) Perforating gastric ulcers, benign and malignant.
 - (3) Perforating intestinal ulcers.
Tubercular and simple.
Cancerous.
Typhoidal.
 - (4) Trauma.
Rupture of Intestine.
Stabs.
Gunshot wounds.
 - (b) Extravasations from viscera occurring in
 - (1) Acute cholecystitis.

- (2) Pancreatic necrosis.
- (3) Rupture of bladder.
- (c) Rupture of abscesses.
- (1) Of liver.
- (2) Of kidneys.
- (3) Of Fallopian tubes.
- (4) Of other regions.
- (d) Ovarian and other tumors with twisted pedicle.
- (e) Acute pancreatitis and fat necrosis.

III. Intestinal obstruction with necrosis may be owing to

- (1) Internal strangulation.
- (2) Volvulus.
- (3) Intussusception.
- (4) Mesenteric embolism and thrombosis.

Simple obstructions without necrosis may be owing to

- (1) Bands.
- (2) Foreign bodies, including enteroliths.
- (3) Pressure from tumor, external to the intestine.
- (4) Strictures of the intestine.

In addition to the foregoing, there are certain general infections without local cause—rheumatic and chemical peritonitis; peritoneal manifestations of general septicemias; other acute abdominal lesions, chief among which are hepatic and renal colic. Rare lesions: Acute pancreatic disease—hemorrhage; suppuration; fat necrosis—mesenteric embolism and thrombosis.

In all lesions in which, from their nature, intervention is usually in good season, as in extra-uterine pregnancies, in tumors with twisted pedicles and in inflammations of the gall bladder, brilliant successes have been obtained, but deplorable failures occur in that class of cases which embrace general peritonitis, acute obstructions and in intestinal extravasations. The list of deaths in the latter class of cases is appalling, especially in view of the fact that they admit of cure if the remedy is applied early enough. The chief reason why valuable time is lost is that the call for help is not heard, or, if heard, is not understood, or even if heard and understood it is not answered.

The symptoms considered are as follows:

Pain: Pain is one of the most important symptoms occurring in all of the foregoing troubles, with the exception of post-operative hemorrhage, which is often so insidious in its onset as to excite no alarm. The expression of pain cannot but make itself appreciated by everyone who sees the patient. While it is the initial symptom of all the lesions under consideration, it is also characteristic of disturbances of function—of indigestion, intestinal catarrh, neuralgia, etc.

Therefore, pain as a symptom must be closely scrutinized. In considering pain there is but one attribute of importance—"the quality of gravity." Are we, however, to interpret abdominal pain as an indication for laparotomy? If not, what kind of pain does demand it? Where situated? Is it sharp or dull, continuous or intermittent, localized or wandering? Does it depend upon serious lesions? Is it accompanied by signs confirming disaster? The pain of serious lesions almost always impresses its gravity upon the patient. It usually has a character of its own by which its gravity is at least suspected by the physician. It is followed, if not immediately accompanied, by signs that prove its seriousness; moreover, they prove it within the limits of time that permit of successful operative cure. Pain may be severe enough to cause of itself other symptoms apparently serious, as nausea and faintness—a combination very suggestive of hemorrhage. When dependent upon hemorrhage pain is followed by a pallor and faintness which becomes more and more profound, until the true cause is obvious. Pain which is of itself ominous produces an effect of gravity, as is shown by the patient's face, which expresses suffering, anxiety and shock. Indeed, the well-known facies of peritonitis is but an advanced stage of the initial expression. Pain is usually unimportant unless it is accompanied by the symptoms of shock.

Shock: The symptoms of shock may at first be unimportant, but sooner or later they manifest themselves more plainly and add the first important evidence as to the gravity of the situation. However sudden the onset of the disease may be, aid cannot reasonably be expected until the symptoms of shock are developed enough to be recognized. The symptoms of shock occur from the violent invasion of the peritoneum by septic material or by blood and by structural lesions suddenly induced by changes of the position of an organ or by failure of its blood supply.

The violence to the peritoneum supplies, in addition to pain, those unmistakable signs which demand, in the strongest terms, immediate exploration. They are local and constitutional. Locally, tenderness and muscular rigidity; generally, nausea, vomiting and increased pulse. The temperature is unaffected or depressed. Elevation of temperature occurs soon, which adds the evidence necessary for decision.

The pain, of itself, is not a sufficient indication for surgical intervention, no matter what its character may be, if the patient seems otherwise well. Pain alone, occurring in the course of a well-recognized disease, as typhoid fever, abscess, tumor and the like, may be sufficient indication for intervention. The depth of the shock in the beginning indicates in a general way whether the lesion is hemor-

rhage or not. In shock from sepsis there is less pallor, less elevation of pulse and less depression of temperature. Reaction is rapid. Muscular rigidity and tenderness are the most important symptoms in cases of sepsis.

The pulse: The pulse, from the onset to the full development of the lesion, varies extremely—increasing in rapidity in shock, whether due to hemorrhage or sepsis, but may be out of proportion to the severity of the lesion. The pulse may not be high when there is deep cardiac depression; it is not infrequently slow when shock is extreme. It is affected in quality rather than rate. It may be slightly or not at all affected in most serious abdominal lesions. Pulse and temperature may be normal in hopeless general infection.

Temperature: The temperature may vary to the extreme limits. It is often subnormal during the initial shock. A rise to normal, with falling pulse, would encourage delay for a more favorable opportunity for intervention. A rise of temperature to normal, but not above, is characteristic of hemorrhage, especially if the pulse become stationary or falls—when a postponement, for the time, of operation is best, as it indicates an arrest of hemorrhage. The combination of temperature and pulse which rise and do not respond to stimulants and artificial heat, calls for immediate intervention in the strongest terms, for it means that the patient is bleeding to death.

Many patients can be saved at the present time by the injection of salt solution and immediate operation, who formerly died during the operation from the effects of shock. Too much reliance cannot be placed upon the temperature as an index of sepsis. Pain, with a temperature of 105 degrees, and with no other symptoms, often rapidly subsides; so even with tenderness and vomiting added. It may be a colic, but when tumor and rigidity are added intervention is indicated.

Bacteria: After watching a good many charts of temperature, one can form a fair idea as to the probable germ producing the trouble. Streptococcus gives high temperature; colon bacillus a low one; tubercle bacillus an eccentric temperature. Staphylococcus usually a low temperature; at times a continuously high temperature.

Rigidity: Rigidity is a symptom of great value in the early hours of acute abdominal lesions. When it accompanies pain it confirms the fear of peritoneal infection. It may be localized or extensive. It means an involuntary effort to protect the parts beneath.

Tenderness: In many cases tenderness is general when the cause is strictly local, as in appendicitis, but quickly becomes localized. An increase in the area of tenderness and rigidity is always

alarming, especially if accompanied by distension. This sign is ominous of general peritonitis.

Nausea and Vomiting: In the fatal diseases pain is usually accompanied by vomiting. No symptom can be more ominous after operation; with many acute lesions none can be more suggestive. Unfortunately, nausea and vomiting accompany many trivial abdominal troubles. As a symptom by itself vomiting means nothing; with pain and diarrhea it means little; with symptoms of abdominal infection it too often means impending death. On the whole, vomiting is a confirmatory, not a positive sign. Pain, nausea, vomiting, rigidity, tenderness and shock, followed by reaction, are conspicuous in the early hours of acute abdominal lesions, and when seen together usually demand immediate intervention.

In sudden abdominal pain with shock, rising pulse, lowered temperature, pallor, restlessness, thirst, especially in woman of child-bearing age, we must suspect hemorrhage unless the history and physical signs suggest some other reason. Irregularity in menstruation, changes in the breasts, add probability to the diagnosis of extra-uterine pregnancy.

Abdominal hemorrhage in the male is rare. Occurring in perfect health, it suggests rupture of vein or artery and intestinal or gastric ulcers. Occurring in typhoid or other diseases, hemorrhage causes no pain. The chief symptom is falling or sub-normal temperature.

Pain, nausea, vomiting, tenderness, rigidity and shock occurring without signs of hemorrhage, especially in males, suggest first appendicitis if the pain is epigastric; becoming localized in the right iliac fossa, appendicitis is almost surely the lesion. Pain beginning low down in the abdomen in women suggests first some acute lesion of the pelvic viscera. The history will frequently assist in localizing the trouble. Examination under anesthesia will frequently enable the surgeon to make the diagnosis. At times it cannot be definitely made when the incision should be so placed as to make the pelvic organs and appendix both accessible to treatment. In cases of ruptured abscesses, of injuries and gunshot wounds, a previous history should point with more or less certainty to the lesion. Acute obstructions give symptoms which are much more indefinite, as many of them closely resemble the symptoms of acute sepsis. The symptoms really caused by obstruction are among the most ominous and urgent, if only their weight can be measured. In general the pain of obstruction is paroxysmal and intermittent. Shock may be slight, fever is abundant, vomiting is excessive. The signs rapidly increase in severity, to which may be added in some cases of obstruction symptoms of beginning gangrene—local and general infection, usually culminating and rapidly fatal.

Though it is often impossible to localize a lesion exactly, it is highly important to place it in the right or left, the upper or lower part of the abdomen. To open the abdomen in the left upper quadrant, and to find an acute appendicitis in the right lower; to make a prolonged search of pelvic viscera, and to find an acute cholecystitis; to hunt for a stricture at the ileo scetal valve and find one at the splenic flexure; these are some of the mistakes which I can recall in which valuable time was lost.

Should inexperienced physicians operate upon these cases? No! The results will be better for the inexperienced to treat these cases medically rather than to operate. No matter how simple the case may appear to be, possible complications cannot be foreseen, and to meet these may require the very highest skill. It is the duty of him who observes symptoms suggesting acute and serious abdominal lesions to lose no time, but to determine the probable nature of the lesions, suggest the proper remedy, and, if the experience in operating is lacking, call to his aid the nearest one who has the experience.

CHLOROFORM.

For giving chloroform, nothing compares with a two-ounce bottle, with glass stopper, a notch being in the stopper and neck of bottle; so that, when placed opposite each other, a drop at a time will escape. Patent droppers are hard to regulate, and often allow too much anesthetic to escape at one time. The inhaler should be a common wire mask, covered with one thickness of old linen, made from old table-cloths or napkins, or two thicknesses of cotton gauze. Linen, being more absorbent than cotton, allows the mask to become wet; on this account the cotton is to be preferred. A fresh one should be used each time, or the old one sterilized. One should not trust the task of giving an anesthetic to a student, nurse, or some physician who is unfamiliar with its administration. The anesthetizer should be cool, thoughtful, and, above all, should have experience; one who appreciates the great responsibility that rests with him, giving his undivided attention to the anesthesia, and not devoting almost his whole attention to the operation. Having cleansed his hands, he should don a sterilized suit and cap. After operation he should see that the patient is properly placed in bed, and watch his condition until he regains consciousness.—F. W. McGuire, in *Buffalo Med. Jour.*

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MARCH 15TH, 1900.

EDITORIAL.

United Confederate Veterans, Reunion of 1900—May 30, 31, June 1, 2 3.

The following letter explains itself. We hope all interested will comply with the request:

LOUISVILLE, Ky., February 17, 1900.

DEAR DOCTOR:—

The Medical Committee desires to make a feature of the Louisville Reunion the assembling and entertainment of physicians who were Surgeons of the Army and Navy of the Confederate States, as well as those who are Veterans and Sons of Veterans.

Let me ask them through the favor of your columns to send me their names, so that the committee may communicate directly with them.

Very respectfully,

PRESTON B. SCOTT,

Chairman Med. Com.

EDITORIAL NOTES.

Dr. Jas. A. Dibrell, of Little Rock, Ark., spent a day in our city recently. He brought Bishop Fitzgerald, of the Diocese of Arkansas, to the city for treatment. The Bishop has suffered recently from an attack of hemiplegia. Hopes are entertained of his ultimate recovery.

Dr. R. H. McLeod, of Palestine, Texas, is recuperating from his arduous labors and is stopping at the popular Avenue Hotel.

SPECIAL COURSE IN OPHTHALMOLOGY. Beginning on Monday, April 16th, 1900, a special course in Ophthalmology will be given to medical practitioners by DR. JAMES MOORES BALL, of St. Louis, assisted by a corps of competent instructors. The duration of the course will be six weeks. It will include didactic lectures, recitations, and clinical demonstrations.

Dr. Ball has at his disposal a few free beds for the deserving poor who are afflicted with glaucoma or cataract. Applicants for these beds must come recommended by the family physician. For further information, address 3509 Franklin avenue, St. Louis.

"The Stylus" is a new medical journal venture from St. Louis. The first copy is all right, and we hope our *confrere* will have abundant success.

Dr. Lyman Ware, a distinguished physician of Chicago, is a guest of the Eastman Hotel.

Dr. Logan, of Kansas City, is spending some weeks in the Valley, a guest of the Arlington Hotel.

PUBLISHER'S DEPARTMENT.

I have prescribed Peacock's Bromides and found it to be one of the finest and most reliable remedies ever produced. Used it in my practice and found it very beneficial in cases of "Cerebro Spinal Menengitis" of the most severest attacks. It does not only help in restoring the brain functions, but helps greatly in reducing fever. Will also state that Peacock's Bromides can be used in cases where "Nervous Attacks" are most readily. I will close by stating that I will still continue its use wherever it be indicated.

Louisville, Ky.

ROBT. E. McDONOUGH, M. D.

I will state that I took Seng myself for stomach troubles and found it to be an excellent preparation, corrective of all dyspeptic symptoms and a builder up of the system.

D. M. BLUE, M. D.

Keysville, Fla.

BROMIDIA IN THE TREATMENT OF EPILEPSY.

The *New Albany Medical Journal* for November, 1898, contains an article on "Epilepsy Treated by the Use of Bromidia," by T. Edward Converse, M. D., of Louisville, Ky., which, after discussing the use of medicines chiefly relied upon in the treatment of that disease, and giving the needful hygienic measures in considerable detail, concludes by referring to "the question often raised: How long will the patient have to keep up the treatment?" If the bromides are given, they should be continued for at least two

years after the last convulsion, or if combined with the chloral hydrate in the form of bromidia, a year and a half is sufficient in most cases. If the patient is having several attacks during the day, a teaspoonful of bromidia after the attack, and repeated in an hour, will abort the next attack; but, as a rule, one teaspoonful will be sufficient.—*Sanatarium, April, 1899.*

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GROWTH OF HAIR.

The popular belief that clipping the hair makes it grow faster, is, according to J. Pohl, not founded on fact. This observer has made accurate measurements of the rate of growth of many hairs under a variety of conditions, and found that, if a portion of the head is shaved, the hair will grow for a month more slowly than the hairs of the unshaved portion. After the first month their rate of growth is about the same. He also found that the shaved hairs grew unevenly, and further study showed him that the hairs on the head and elsewhere are arranged in groups of two, three and four, the members of a group being closely related anatomically. One of them outgrows the other for a time, and then its pace slackens while a younger one presses into first place, to be followed by a third, etc. In other words, each hair has a life history and its rate of growth varies at different times. It is most rapid during the middle period of its life. When old, a hair falls out and a young one grows up in its place. As the hairs in a hair-group grow old and fall out successively, baldness is avoided. The average maximum length of the hair of the head is given as from two to three and one-half feet, and the average life from two to six years. The growth per month varies from one-half of an inch to an inch or more.—*Dermatologisches Centralblatt.*

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—The Medical Magazine, London.

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I. E. REHLANDER, Traveling Passenger Agent	103 Read House, CHATTANOOGA, TENN.
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C. G. MILLER, City Ticket Agent	309 Ohio Levee, CAIRO, ILL.
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J. C. LEWIS, Traveling Passenger Agent	AUSTIN, TEX.
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So. Pac. to El Paso, T. & P. to Texarkana, and the I. M. Route, Texarkana to Hot Springs.	
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